

(19)



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European Patent Office

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(11)

EP 0 790 714 A3

(12)

## EUROPEAN PATENT APPLICATION

(88) Date of publication A3:  
22.08.2001 Bulletin 2001/34

(51) Int Cl.7: H04B 7/185

(43) Date of publication A2:  
20.08.1997 Bulletin 1997/34

(21) Application number: 97101852.8

(22) Date of filing: 06.02.1997

(84) Designated Contracting States:  
DE FR GB

(30) Priority: 16.02.1996 US 603948

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## (54) Handset signalling time slot assignment plan for satellite mobile communication

(57) A mobile, satellite-based communication system (20) includes a defined signaling arrangement developed from an analysis of factors including movement of mobile terminals (28), movement of the satellite (22), beam discrepancies and duration of the call to the mobile terminal (28) to set up a frame assignment plan for time division multiple access (TDMA) carriers and identifying permissible frame offset which can be accommodated throughout the entire transmission. As a result, timing and frequency references from a mobile to mobile command may be provided from a reference source (24)

along with receive and transmit data communications without losing the command signals or the communication information and providing highly efficient use of each carriers time slots for receiving/transmitting communication signals. Similarly, the signaling arrangement permits an efficient frame structure and a time slot assignment plan that does not require enhanced equipment at the mobile terminal (28). Moreover, the signaling frame assignment is applicable to multibeam satellite-based mobile communication systems for use with communications between mobile terminals (28) and gateways (24, 20) as well as between mobile terminals (28).

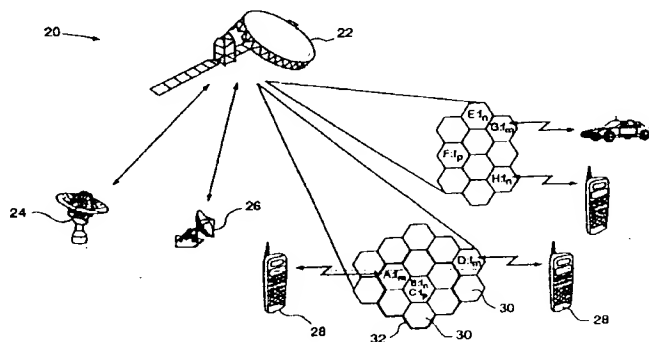


Fig. 1

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# EUROPEAN SEARCH REPORT

Application Number  
EP 97 10 1852

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A	* column 4, line 18 - line 26 * * column 4, line 9 - line 10 *	1	
Y	WO 95 24655 A (NOKIA TELECOMMUNICATIONS OY; HEISKARI MIKA (FI); LEHMUSTO MIKA (FI) 14 September 1995 (1995-09-14) * page 1, line 21 - line 34 * * page 2, line 30 - page 3, line 12 *	17	
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The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			H04B H04J
Place of search MUNICH		Date of completion of the search 19 June 2001	Examiner Draper, A
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application I : document cited for other reasons A : member of the same patent family, corresponding document</p>			

EPJ FORM 1503 03 82 (PAC01)

**ANNEX TO THE EUROPEAN SEARCH REPORT  
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19-06-2001

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